trough **10** extend slightly downwardly at an angle of 3.75° in the direction of conveyance.

A balanced vibratory drive means generally indicated at **18** is attached to the excited frame. As indicated, such drive means includes a balanced counter-rotating vibrator **20** which when driven by a belt and pully connection **22**, to a suitable variable speed drive motor **24** (e.g. 1 HP) effects vibration of the excited frame along a line of force indicated by the arrow F which is substantially perpendicular to the face of the beam springs **12**. The total vibratory stroke is preferably between ⅛ inch and ¾ inch and can be varied by changing the speed of the motor having an average rotative speed of 1020 r.p.m. Reference is again made to the aforementioned U.S. Patent for structural and operational details.

The bag B whose contents are to be mixed is shown in FIG. **5**. In this instance, the bag is flexible and when filled with a large quantity of grain G and two small portions of an inoculum such as mycelium M will assume, when placed on a flat surface, a length of approximately 14 inches, a width of approximately 6 inches and a height of approximately 4 inches. This filled bag will weigh about 6 pounds.

To perform the mixing method of the present invention on this particular filled bag, the conveying trough **10** should be wider than the bag length (e.g. 19 inches) and will have placed therein a plurality of belt sections **30** longer than the width of two bags (e.g. 12 inches) and having a frictional surface **32** as indicated, for example, by a commercially available friction belt as shown best in FIG. **4**. Preferably each belt section **30** is supported at a slight downward angle (e.g. 5°) relative to the bottom of the trough **10**. Therefore, when the forward vibratory stroke occurs, a bag B on the belt will experience a forward conveyance but at the same time will also experience a counter-clockwise rotation as indicated by the arrow A in FIG. **3**, thus initiating some mixing of the bag contents. At the end of each belt section **30**, a baffle **34** rises about 3 inches above the adjacent belt surface and has a rearwardly-extending flange **36** composed of rubber or other resilient material and having a generally undulating, sinusoidal edge directed oppositely to the general direction of conveyance. Thus when a filled bag B engages the flange **36** and baffle **34**, its progress will be temporarily blocked but it will continue to rotate in a counter-clockwise direction as shown clearly in FIG. **3**. Furthermore, because of the flange undulations, mixing forces will be directed both rearwardly and laterally against the bag as indicated by the plurality of small arrows C in FIGS. **2** and **3**. Thus, the mixing action is further enhanced.

The manner in which the temporarily blocked bags can be further advanced can best be visualized by reference to the operational sequence shown in FIGS. **6A–6E**.

As shown in FIG. **6A**, three bags B_1,B_2, B_3 are shown in blocked dispositions rotating in counter-clockwise directions so the mixing action continues as previously described. When a fourth bag B_4 is moved into contact with the belt section **30**, it will be advanced into contact with the bag B_3 and since it is rotating in a counter-clockwise direction, such engagement will initiate a reversed clockwise rotation of the bag B_3 (similar to meshing gears) and cause it to climb over the flange **36** and baffle **34** in the manner indicated in FIG. **6C**. The bag B_3 will thereafter come into contact with bag B_2 as shown in FIG. **6D** and it will climb over the baffle **34** and flange **36** to come into contact with bag B_1 as indicated in FIG. **6E**.

The bags B_4 and B_3 will, of course, continue to rotate in a counter-clockwise direction to continue the mixing action until a further bag is introduced to function in the fashion described.

Obviously, various modifications and/or alterations can be made, for example, in the conveyor structure and dimensional details for various other bags or containers, and the foregoing description of the method and apparatus for carrying out the same are not to be considered as limiting, and the actual scope of the invention is to be indicated only by the appended claims.

What is claimed is:

1. The method of mixing fluent material enclosed within a flexible bag which comprises the steps of

conveying a plurality of the bags in sequence along a predetermined path, by fore and aft vibratory motion of a supporting and moving surface frictionally engaging the bags to effect vibration and bag turning in one direction during such conveyance,

temporarily blocking the conveyance of a first individual bag and

engaging the first individual blocked bag with a succeeding turning bag in a fashion to turn the first bag in the reverse direction and continue conveyance of the first individual bag past the temporary blocked position.

2. The method of mixing fluent material enclosed within a flexible bag according to claim **1** wherein

the temporary blocking of bag conveyance is achieved by placing a baffle in the predetermined path above the moving and supporting surface.

3. The method of mixing fluent material enclosed within a flexible bag according to claim **2** wherein

the engagement of the first bag with a succeeding bag effects reversed rotation of the first bag to effect movement thereof over the blocking baffle.

4. The method of mixing fluent material enclosed in a flexible bag according to claim **1** wherein

the temporary blocking of bag conveyance is achieved repetitively by placing a sequence of baffles in the predetermined path above the moving and supporting surface.

5. Apparatus for mixing fluent materials enclosed in a flexible bag which comprises

means for conveying the bags in a sequence along a predetermined path including a friction belt, and means for effecting vibratory action of said belt to effect advance and turning of each bag in one direction,

at least one baffle disposed above said conveying means to temporarily block forward conveyance of a bag positioned thereagainst, said advance and turning of a succeeding bag against the blocked bag effecting reversed turning movement of the blocked bag over said baffle for continued conveyance.

6. Apparatus for mixing fluent materials enclosed in a flexible bag according to claim **5** wherein

said friction belt slopes downwardly in the direction of conveyance.

7. Apparatus for mixing fluent materials enclosed in a flexible bag according to claim **5** wherein

a plurality of baffles are disposed above said belt at spaced intervals, each interval being at least twice the width of a single bag.